# Familiarity Bias and the Propensity to Issue Going Concern Opinions


## Abstract

This study examines the association between familiarity bias and audit firm judgements using going concern opinion modifications. We conjecture that familiarity bias is highest when an audit firm is least familiar with its clients. We measure familiarity bias using auditor changes because familiarity bias is likely to be the highest on the initial year of an audit relationship. We find the propensity to issue a going concern modification to be much higher during this initial period, even after controlling for a multitude of factors known to be determinants of going concern modifications. Our findings also suggest the phenomenon appears to slowly dissipate over a five-year auditor client tenure. Supporting our theoretical prediction, further results find that as the auditor is more familiar with the client's industry (e.g. industry expertise) the main effect is moderated. Our results are also strongest when the successor auditor is located in a different locale than the previous auditor, situations leading an even more pronounced lack of familiarity. We also examine SOX 404 internal controls impact, finding auditors are more likely to deem internal controls ineffective when they are unfamiliar with clients.



*Keywords:* Familiarity bias, going concern, internal control weaknesses, auditor judgment

## I. Introduction

We examine familiarity bias in relation to audit firm judgements using going concern opinion modifications. We define familiarity bias as a disproportionate weight in favor of those clients who auditors have greater knowledge of their business. Thus, familiarity bias is highest when an audit firm is least familiar with its clients. We measure familiarity bias using auditor changes because familiarity bias is likely to be the highest in the initial stages of an audit relationship. Familiarity bias has been shown to influence financial market participants' investment choices (Kang and Stulz 1997; Coval and Moskowitz 1999; Huberman 2001; Li 2004; Ivkovic and Weisbenner 2005; Massa and Simonov 2006; Nofsinger and Varma 2002; Riff and Yagil 2016; and Schumacher 2017). To date, there has been little research regarding whether familiarity bias influences financial market monitors such as auditors. We conjecture that familiarity bias is more likely reflected in auditor's areas regarding judgment such as issuing going concern opinion modifications.

Going concern opinion modifications are important to financial statement users. Going concern opinion modifications signal a company's operating uncertainties over the next fiscal year (PCAOB 2003). Auditors' evaluations of these uncertainties are made based on knowledge obtained from audit procedures and knowledge of conditions and events existing at or prior to the completion of fieldwork. The PCAOB Standard Advisory Group Meeting in May 2012 introduced discussion points for going concern communication and evaluation, including the definition of thresholds for substantial doubt, additional details relating to the auditor's conclusion, and required procedures when evaluating going concerns (PCAOB 2012). While regulators consider whether current going concern guidance and standards adequately disclose relevant company uncertainties (FASB 2013; PCAOB 2012; Tysiac 2014; PCAOB 2016; PCAOB 2017), this study contributes to that discussion because going concern opinion modifications require auditors to process complex information, which represents a setting where familiarity bias may emerge.

Prior literature suggests that the auditor client relationship is a determinant for auditors when issuing going concern opinion modifications (Carson, Fargher, Geiger, Lennox, Raghunandun, and Willekens 2013). We use changes in auditor as our familiarity bias measure as we conjecture that familiarity bias is highest during the first year of an auditor client relationship.

Numerous studies document auditor changes in the year after clients receive going concern opinion modifications (Chow and Rice 1982; Smith 1986; Geiger, Raghunandan, and Rama 1998, Lennox 2000, Carcello and Neal 2003, Vanstraelen 2003; Chan, Lin, and Mo 2006). However, the literature does not examine whether switching auditors impacts the probability that a client will receive a going concern opinion modification (Chow and Rice 1982; Krishnan 1994; Krishnan and Stephens 1995; Krishnan and Krishnan 1996; Geiger, Raghunandan, and Rama 1998, Lennox 2000, Carcello and Neal 2003). Lennox (2000) predicted going concern opinon modifications that clients would have received if they had changed auditors opposite to those that actually did. Carson et al. (2013) call for additional research to further understand the auditor client interaction and going concern opinion issuance. Thus, examining auditors' familiarity bias in relation to the propensity to issue going concern opinons informs the literature about whether auditors' judgments regarding complex data assessed when contemplating a going concern opinion are biased when the auditors are least familiar with the client.

Prior auditor judgment literature suggests that auditors refer to long-term memory on engagements that involve consideration of further evidence to make decisions (Plumlee 1985, Mocckel and Plumlee 1989). This finding relies on the premise that auditors use long-term memory to store evidence gathered for particular clients. Tan (1995) suggests that auditor changes reduce the tendency to focus on more consistent facts arising from repeat engagements. For first time engagements, the resulting absence of this long-term memory from repeat engagements gives rise to a lack of familiarity and the bias that ultimately accompanies it.

Using a sample of companies from 2008-2017, we examine whether than is an association between familiarity bias and the propensity to issue going concern opinions. We find a positive association between switching auditors and the likelihood of issuing a going concern opinion. Specifically, we find that a change in auditor increases the likelihood of going concern opinion by 1.5%. We find a monotonic decline in the probability of going concern as the auditor becomes more familiar with the client (i.e., the tenure period lengthens). Our results contradict prior findings that suggest a positive association between auditor tenure and the propensity to issue a going concern opinion prior to bankruptcy (Geiger and Raghunandan 2002). Additionally, we find this effect is highest when the client firm switches both the audit firm and auditor location. This main effect is also amplified when auditors have little to no industry expertise, another

setting whereas familiarity bias is likely to be pronounced. Finally, we also find that auditors are more likely to deem internal controls ineffective when they are unfamiliar with clients.

Our results are robust to using numerous client level financial controls, different econometric models and specifications, and different methods to compute standard errors. In additional sensitivity tests that include auditor and client-level fixed effects, as well as the inclusion of the prior period's going concern decision, our results continue to suggest a positive association between familiarity bias and issuance of going concern opinions.

Investigating the effect of familiarity bias on the auditors' propensity to issue going concern opinions and deem internal controls ineffective contributes to several streams of literature. First, this study contributes to the literature on auditor switching and opinion shopping. Prior studies are inconclusive regarding whether changing auditors removes the going concern opinion. We provide evidence that opinion shopping is less successful because a change in auditor introduces a familiarity bias that leads to higher probability of issuing a going concern opinion. Second, we extend the familiarity bias literature by providing evidence that the familiarity heuristic expands beyond investors to an important financial market monitor, auditors. Finally, we contribute to the extant literature on auditor judgments by providing evidence on the effect of familiarity bias and evidence suggesting that auditors' decisions regarding complex information are affected by the auditors' experience with clients.

The remainder of this paper proceeds as follows. Section II describes familiarity bias, auditor judgment, going concern opinion, and internal control effectiveness literature and develops the hypotheses. Section III describes the research methodology and results. Section IV provides additional robustness results. Section V provides the conclusion.

## II. Background and Hypotheses Development

### A. Going Concern Overview

A going concern opinion is a signal of substantial doubt about a company's ability to operate beyond one year based on evidence obtained during the audit (PCAOB 2003). It is the auditors' responsibility to continuously evaluate companies' immediate viability and inform external stakeholders of this operating uncertainty through the independent auditor's report. Auditors issue a modified audit report containing a going concern explanatory paragraph when the audit

firm concludes there is substantial doubt that companies will survive the next financial year. In order to determine whether there is substantial doubt regarding survival, auditors use judgment when evaluating both financial and non-financial information, such as strategic initiatives and mitigating factors.

Although the going concern opinion signals uncertainty, questions continue to exist about whether audit firms and companies adequately disclose information about operating uncertainties (PCAOB 2016; PCAOB 2012; FASB 2013; PCAOB 2015a; FASB 2016). Recent enhancements to management's disclosures as well as the PCAOB's continued discussion about going concern requirements suggest that management and audit firm communications with investors do not adequately inform investors about the uncertainty surrounding companies operations. The ability to accurately identify a company with a going concern issue is critical for external stakeholders evaluating companies' financial condition (U.S. House of Representatives 2002).

**B. Familiarity Bias**

Familiarity bias is a common heuristic individuals use to help categorize data and make decisions when analyzing large amounts of complex information. Familiarity is evidenced to lead individuals to assign greater value to more familiar options (Fox and Levav 2000). Fox and Levav (2000) find that individuals are biased to view less familiar events as less likely to occur. Based on these finding, we suggest familiarity bias may lead auditors to issue going concern audit opinion modifications in the year clients switch to new auditors. Prior research suggests familiarity bias is associated with binary choice inferences. Specifically, individuals are predicted to infer that the more familiar object in a pair has a higher criterion value on the to be judged dimension (Honda, Abe, Matsuka, Yamagishi 2010). Extending these results to our study suggests that auditors who are more familiar with their clients are more likely to not issue going concern audit opinion modifications. Thus, when auditors assess going concern opinion modifications in the initial year the client switched auditors, familiarity bias may lead to a higher probability of issuing going concern opinion modifications.

The majority of familiarity bias research within capital markets has focused on investment choices (Huberman 2001; Ivkovic and Weisbenner 2005; Nofsinger and Varma 2002; Riff and Yagil 2016; and Schumacher 2017). Huberman (2001) finds that investors are more likely to hold shares in the phone company that services them, and Ivkovic and Weisbenner (2005)

suggest that investors disproportionately hold companies that are headquartered within 250 miles of their home. Further research examined whether professional fund managers would be less prone to exhibit familiarity bias. The findings provide evidence that sophisticated investors also exhibit familiarity bias (Schumacher 2017, Riff and Yagil 2016, Nofsinger and Varma 2012). Thus, as a whole, financial market participants seem to assign greater (less) value to those firms with which they are familiar (unfamiliar). Additionally, credit rating agencies are evidenced to exhibit familiarity bias. Ayres and Dolvin (2019) suggest first time credit ratings are lower because the credit rating agencies are less familiar with companies during the initial rating process. We extend the familiarity bias literature stream specific to capital markets by examining familiarity bias in relation to financial markets' monitors, auditors.

### C. Auditor Judgment and Decisions

Auditor judgment is critical for decisions regarding uncertainty that lead to going concern opinion modifications. Prior literature documents that long-term memory on engagements that involve consideration of further evidence to make decisions impacts auditors' judgment (Plumlee 1985, Moeckel and Plumlee 1989). This finding relies on the premise that auditors use long-term memory to store evidence gathered for particular clients. Tan (1995) finds that auditor changes reduce the tendency to focus on more consistent facts arising from repeat engagements. For initial audit engagements, the resulting absence of this long-term memory from repeat engagements gives rise to a lack of familiarity and the bias that ultimately accompanies it.

Prior research documents that auditors' judgments are affected by biases (Trotman Tan Ang 2011). Peecher and Piercey (2008) consider the evaluation of audit quality when adverse outcomes exist and find adverse outcomes could bias individual judgments. Going concern opinion modifications are adverse audit outcome and an audit quality measure (PCAOB 2015b). We extend the literature to examine whether familiarity bias are associated with uncertainty judgments related to issuing going concern opinion modifications.

### D. Determinants of Going Concern Opinions

Prior research documents associations between auditor switching and going concern opinion modifications. The prevailing evidence documents a relationship between auditors issuing going concern opinion modifications and clients switching auditors (e.g., Chow and Rice 1982; Smith

1986; Geiger et al. 1998; Lennox 2000; Carcello and Neal 2003; Vanstraelen 2003; Chan et al. 2006). However, Hoitash and Hoitash (2009) findings support fewer clients dismiss their auditors following going concern opinion modifications in the post-SOX era. Our study differs from this stream of research because we are examining the propensity to issue a going concern opinion modification in the year a client changes auditors. An unresolved question in the literature is whether switching auditors is successful in terms of removing the going concern opinion modification, which is often referred to as opinion shopping. Early research establishes no association between switching auditors and subsequent improvements in audit opinions (Chow and Rice 1982; Krishnan 1994; Krishnan and Stephens 1995; Krishnan and Krishnan 1996; Geiger et al. 1998). Lennox (2000) does not examine actual auditor switch decisions; instead he analyzes opinion shopping by predicting the opinions that clients would have received if they made switch decisions opposite to those that actually occur. Lennox (2000) suggests that clients would have received less favorable audit opinions if clients made switch decisions opposite to those actually observed. Our measure of familiarity bias is clients that choose to switch auditors. We examine whether familiarity bias is associated to going concern opinion modifications in the initial year that clients make the decision to switch auditors. Our study contributes to the inconclusive evidence between auditor switching and going concern opinion modifications.

A related stream of literature examines auditor-client tenure as a determinant for issuing going concern opinion modifications. Geiger and Raghunandan (2002) find a positive association between auditor tenure and the propensity to issue going concern opinion modifications prior to bankruptcy. Read and Yezegel (2016) examine bankrupt clients and find no association between going concern opinion modifications and auditor tenure for Big 4 audit firms. Their results document non-Big 4 firms are less likely to issue going concern opinion modifications in initial audit years. Given competing arguments suggesting whether auditor tenure is associated with the likelihood of issuing going concern opinion modifications, we state the following hypothesis in the null:

> H1: Audit firms' familiarity bias is not associated with the likelihood of issuing going-concern opinion modifications.

## III. Methodology and Results

## A. Sample and Data

Our data is obtained from two primary datasets. Going concern opinions, internal control opinions and audit fees information were obtained in separate files from the Audit Analytics Inc. databases. Our financial controls data primarily comes from the Compustat North American annual financial statement filings database.

We limit our analysis to all opinions rendered on financial statements ending in the calendar years 2008 through 2017. This sample time period is chosen for a couple of reasons. First of all, it begins well after demise of Arthur Andersen and the inception of Sarbanes Oxley (SOX), as both caused a considerable amount of upheaval within the auditing industry. Starting the sample in 2008 potentially allows to avoid unusual behavior that may have occurred as a result of these two events. It also allows for internal control audits and Section 404 work to be fully implemented as a part of our analysis; internal control audit outcomes have been shown to have an influence upon going concerns (Goh et al. 2013). The period of upheaval just before the implementation of SOX led to a drastic change in auditor behavior (Fargher and Jiang 2008; Feldmann and Read 2010; Geiger et al. 2005; DeFond and Lennox 2011).

The second primary reason for our sample period is that 10 years allows for a full economic cycle to manifest in the data. Our sample period includes the severe recession and financial crisis that began in 2008, the subsequent recovery, and the better economic years later in the sample. Going concern opinions are highly linked to the health of the overall economy; our sample is generalizable as it contains all states of the economy.

Only those observations for which all variables are populated are retained in the sample. This results in an overall sample size of 35,188 firm-years for our primary sample. This also results in 6,720 unique audit client firms and 598 unique audit firms within our sample.

## B. Econometric Model

To test our primary hypothesis, whether a change in auditor leads to a higher likelihood of a going concern opinion, we employ the following probit[1] regression model:

[1] We employ a probit model as our dependent variable is binary in nature. In all of our tests, we also employ a linear probability model (i.e., OLS) to ease in interpretation and to test the robustness of the latent assumptions within the probit model. We also employ logistic regression in our robustness testing.

$$GC_{it} = \lambda_0 + \lambda_1 SWITCH_{it} + \lambda_2 LN\_AGE_{it} + \lambda_3 LN\_AT_{it} + \lambda_4 ABNORMAL\_FEES\_PCT_{it}$$
$$+ \lambda_5 CLIENT\_IMPORTANCE_{it} + \lambda_6 LEVERAGE_{it} + \lambda_7 LOSS_{it} + \lambda_8 ROA_{it}$$
$$+ \lambda_9 INT\_COVERAGE_{it} + \lambda_{10} GROWTH_{it} + \lambda_{11} CURRENT\_RATIO_{it}$$
$$+ \lambda_{12} MKTBK_{it} + \lambda_{13} ALTMAN_{it} + \lambda_{14} INVESTMENTS_{it} + \lambda_{15} BIGN_{it}$$
$$+ \lambda_{16} IC\_INEFFECTIVE_{it} + \lambda_{17} LN\_IND\_CLIENTS_{it} + \mu_{it}^{234}$$

$GC_{it}$ is the dependent variable and takes a value of zero if the audit firm did not make a going concern modification to the annual audit report. If such a modification was made, then this variable takes the value of one. This variable was obtained from the Audit Analytics Inc. opinions database. In formulating this variable, we restricted our data to only going concern opinions attached to annual form *10-K, 10-K405, 10KSB, 10KSB40,* and *10-KT* filings. We also restricted our data to the first initial filing for an audit client's fiscal year. This treatment avoids the incorporation of going concern opinions on amended filings at a later date.

Our primary variable of interest is $SWITCH_{it}$. It measures whether there was a change in the audit firm from the prior year to the current year and takes the value of one if this is the case, zero otherwise.[5] A positive coefficient loading for $\lambda_1$ would suggest that a change in audit firm increases the likelihood of a going concern opinion while a negative loading would indicate the opposite.

We also incorporate several controls to control for potential omitted variable bias as our variable of interest is not randomly induced. We control for both the age of the audit client firm , $LN\_AGE_{it}$, (Knechel and Vanstraelen 2007) and the size of the audit client firm, $LN\_AT_{it}$

[2] Despite their common use in accounting research, industry and year fixed effects are not included in our primary regression specification. This is done because the predominant research regarding going concern opinions does not employ them (Bhaskar et al. 2017; DeFond et al. 2002; Carey and Simnett 2006; Blay and Geiger 2013). In our analyses, however, we do include them for robustness purposes.

[3] We cluster our standard errors at the audit firm client level. We do not employ two-way clustering as our primary mode of analysis given concerns about the depth of our panel data set (i.e., 10 years) (Petersen 2009). We do perform two-way clustering in our robustness tests.

[4] To limit the influence of statistical outliers of our continuous variables, we winsorized those variables at the 1% and 99% levels.

[5] We acknowledge that our measurement of auditor switches could mistakenly identify situations where the audit firm appears to change but in reality it was acquired. To the extent this exists within the dataset, this situations would create a form of bias for our main hypothesis test and it would bias against finding a result. Merger situations where the audit team / partner remained the same would not likely impact familiarity bias.

(Carcello and Nagy 2004; Carey and Simnett 2006; DeFond et al. 2002; Lim and Tan 2008). The age of the audit client is measured using the natural log of the years (plus one) since the firm first went public. The size of the audit client is measured using the natural log of the book value of its assets as of the end of the fiscal year.

Both audit and non-audit fees have long been hypothesized to influence audit outcomes (Basioudis et al. 2008; Blay and Geiger 2013; Lim and Tan 2008; Robinson 2008); we thus incorporate two fees related variables. The first is $ABNORMAL\_FEES\_PCT_{it}$ and it measures the total actual client fees as a percentage of expected total fees. It is produced by regressing the natural log of total fees upon the other covariates in the econometric model and then predicting an outcome. Dividing the actual amount of fees by the predicted level of fees gives our measurement. This is done because if fees do influence reporting outcomes, it is most likely to manifest for the most lucrative clientele.[6] The second fees related variable is $CLIENT\_IMPORTANCE_{it}$. It is measured as the observation's total fees as a percentage of the auditor's total fees for that given calendar year. Similar to abnormal fees, auditor judgement and independence may break down as a client becomes more important to the audit firm (Li 2009). This may change going concern reporting behavior.

We also include a bevy of financial performance related controls as the going concern opinion is heavily influence by financial outcomes. The first of these is $LEVERAGE_{it}$ and measures the audit client's exposure to financial leverage; financial leverage increases the risk of bankruptcy for a firm. It is measured as the ratio of total liabilities to total assets (DeFond et al. 2002). The second of these variables is $LOSS_{it}$ (Bruynseels and Cardinaels 2014). Suffering a net loss, through the correlated loss of cash flow, increases bankruptcy risk. It is measured as a binary variable equal to one if the observation had negative net income for the year ended. The third financial control variable is $ROA_{it}$. The higher a firm's return on assets, the lower its bankruptcy risk, ceteris paribus. This variable is measured as net income before special items as a percentage of total assets. The fourth financial control variable is $INT\_COVERAGE_{it}$. It measures a firm's ability to meet its interest obligations as this ability reduces bankruptcy risk. It

[6] This is also done out of statistical practicalities. Total fees or the natural log thereof are highly related to both the size and the age of a firm, two variables already included in the model. This technique effectively orthogonalizes fees to the other variables in the model, reducing complications that might arise from multicollinearity.

is measured as interest expense as a percentage of net income before interest and taxes.[7] The fifth financial control variable is $GROWTH_{it}$. It measures the percentage change in revenue for the client firm from the previous year.[8] Growth has an impact on financial performance and going concern reporting (Johnson et al. 2002). The sixth financial control variable is $CURRENT\_RATIO_{it}$ and is the ratio of current assets to current liabilities. This essentially measures the liquidity of the client firm and liquidity is often associated with a diminished chance of bankruptcy, especially in the short term. The seventh financial control is $MKTBK_{it}$ (Johnson et al. 2002). It is measured as the ratio of the market value of equity and liabilities to the book value of assets (e.g., equity and liabilities). Ceteris paribus, firms with higher market values typically are thought to have brighter futures while depressed values are potential signals of future financial difficulties. The eighth financial control is $ALTMAN_{it}$ (Altman 1968) and is used to measure financial distressed. Financial distress measures such as Altman and Zmijewski (Zmijewski 1984) have been prominent aspect of modeling going concern behavior (Bhaskar et al. 2017; Carcello and Neal 2000, 2003; DeFond et al. 2002; Johnson et al. 2002). The ninth financial control is $INVESTMENTS_{it}$. It is measured as the ratio of cash and short – term investments as a percentage of total assets. Similar to the current ratio, it is another measure of liquidity and a proxy for risk of bankruptcy.

We also control for some auditor characteristics as these might also impact the going concern decision. The first of these is $BIGN_{it}$. This is a binary variable equal to one if the current year auditor is one of the "big four" accounting firms. The size of the auditor has been associated with the propensity to issue a going concern (Boone et al. 2010; Kaplan and Williams 2012). The second auditor characteristic control is $IC\_INEFFECTIVE_{it}$. This is also a binary variable equal to a one if the auditor deemed the client's internal control to be ineffective in its opinion about the operating effectiveness of internal control. Such instances have been documented to more likely result in going concern opinions (Goh et al. 2013; Hammersley et al. 2012). The final control for auditor characteristics is $LN\_IND\_CLIENTS_{it}$. It is measured as the natural log

[7] This measurement is opposite of conventional ways to measure this construct. However, by placing interest expense in the numerator, we avoid missing observations that might arise from have a zero denominator observation for firms that do not have interest expense. It is important to keep these types of firms in the sample as they are usually among the healthiest and are less likely to receive a going concern opinion.

[8] Revenues are employed here instead of profits to avoid the complications that arise from computing growth for negative numbers.

of the number of clients the audit firm has within that particular two digit SIC code for the given calendar year. Industry specialization and industry expertise have been shown to impact audit outcomes (Reichelt and Wang 2010).

**C. Descriptive Statistics**

Table 1 summarizes the descriptive statistics for our primary sample of 35,188 firm-years. Columns 1, 2, and 3 detail the mean, median, and standard deviation of each variable for the entire sample. Going concern opinions occur in approximately 9.2% of all observations. This is slightly higher than the rate (8%) noted by DeFond et al. (2002), but our period incorporates the financial crisis while theirs does not. Changes in auditors occur in approximately 8.3% of all observations. Approximately 56% of all observations are audited by one of the "big four" auditors and 2.8% of the observations are deemed to have some aspect of ineffective internal controls. The average client is 4.2% of the audit firms public client base, but the median value is only 0.01, which reflects the vast differences in client portfolios between the "big four" audit firms and the smaller auditors who undertake public company audits.

**INSERT TABLE 1 HERE**

Columns 4 and 5 divide the sample into two groups. The first group (Column 4) is the observations for which no change in auditor occurred. The second group (Column 5) are the observations for which a change in auditor did occur. Both columns display the average value for each variable and Column 6 computes the difference between the two sub samples. Column 7 applies difference in means t-tests to determine if the two sub-samples are statistically different from one another. With the exception of $CURRENT\_RATIO_{it}$, all variables exhibit statistical differences between the two sub-samples. Most pertinent of these is the difference in going concerns between the two sub-samples; client firms incurring a switch in auditor receive going concern opinions in 22% of the observations compared to only 8.1% of client firms not incurring a change in auditor. This difference is statistically different at the p-value < 0.01 level. This univariate analysis does provide some support for our main hypothesis. However, as the other variables indicate, substantial differences exist between the two subsamples; thus, a more rigorous multivariate analysis is warranted to control for these other factors that may influence the likelihood of a going concern opinion. This is especially important for the nine financial control variables included in the analysis.

Table 2 displays the univariate pairwise correlation coefficients between all of the variables in our main research design. Any statistically significant relations (p-value < 0.10) are displayed in bold italics. Of particular interest should be the univariate relation between a change in auditor and the instance of a going concern opinion. The correlation coefficient between $SWITCH_{it}$ and $GC_{it}$ is positive and statistically significant. Similar to Table 1, this suggests that a significant univariate relation exists between the two, providing further evidence to support our main hypothesis. However, $GC_{it}$ is also positively linked to several other variables that are also positively correlated with $SWITCH_{it}$. This also supports the notion for more rigorous multivariate analyses in our primary hypothesis test(s).

**INSERT TABLE 2 HERE**

**D. Multivariate Analysis**

Table 3 details the results of our primary hypothesis tests. Table 3 is arranged into five columns. The first column displays our econometric model using probit regression without the inclusion of our variable of interest, $SWITCH_{it}$.[9] Columns 2 and 3 continue the probit regression analysis, introducing $SWITCH_{it}$. Column 2 omits industry and time period fixed effects, as is common in going concern opinion research (DeFond et al. 2002; Bhaskar et al. 2017), but Column 3 includes them for robustness purposes. Columns 4 and 5 replicate Columns 2 and 3 with the exception that the probit regression specification has been replaced with a linear regression specification (e.g., OLS). All standard errors throughout the table are clustered at the audit client firm level.[10]

**INSERT TABLE 3 HERE**

In Column 1 the direction of the results for the control variables is consistent with our expectations. Going concern opinions are less likely for older firms ($LN\_AGE_{it}$), larger firms ($LN\_AT_{it}$), more profitable firms ($ROA_{it}$), firms where interest expense is a lower proportion of earnings before interest and taxes ($INT\_COVERAGE_{it}$), firms with more liquidity ($CURRENT\_RATIO_{it}$, $INVESTMENTS_{it}$), firms with higher relative market values ($MKTBK_{it}$) and

[9] All specifications within this table are robust to using a logit model in lieu of a probit model. The *SWITCH* coefficients for Columns 2 and 3 become 0.391 and 0.449, respectively. The z-statistics become 5.36 and 6.01, respectively.

[10] The specifications within this table are also robust to two-way clustering over the audit client firm and time dimensions, despite the relatively short panel window (10 years). For instance, the coefficient in Column 2 becomes 0.200 and the z-statistic becomes an even stronger 9.03.

for firms whereas the auditor has higher industry expertise *(LN_IND_CLIENTS$_{it}$*). Receiving a going concern opinion is more like when financial leverage is high (*LEVERAGE$_{it}$*), the client firm is incurring a net loss (*LOSS$_{it}$*), the client firm is growing rapidly (*GROWTH$_{it}$*), the auditor is a "big four" auditor (*BIGN$_{it}$*), and the client firm has been deemed to have deficient internal controls (*IC_INEFFECTIVE$_{it}$*).

Overall, the results in columns 2 through 5 support our predictions for the main hypothesis. The coefficient for *SWITCH$_{it}$* is positive and highly significant for all four of the model specifications. Interestingly, the results are slightly stronger once industry and time period fixed effects are included in the model, despite the fact that both changes in auditors and going concerns are likely to both be more prevalent in certain time periods and industries (e.g., housing construction in 2008 and 2009)[11]. For the most part, the control variables also hold their original relations to the dependent variable from Column 1 throughout these four analyses. Our hypothesis is thus supported and the evidence suggests that familiarity bias, or lack thereof, can play a role in auditor's going concern determinations.

The economic significance of these results is even more pronounced. The rudimentary ordinary least squares results in Columns 4 and 5 suggest that a change in auditor alone raises the probability of a going concern opinion by 3.0% and 3.1%, respectively. Since economic interpretation of the magnitude of nonlinear models such as the probit and logit models is difficult to do directly, we also employ an average marginal effect analysis (untabulated) to Columns 2 and 3). When this is performed, the coefficients transform into 0.015 and 0.016, respectively. This suggests a change in auditor, after controlling for all of the other items that may affect a going concern opinion, increases the likelihood of a going concern opinion by 1.5% and 1.6%. While approximately half of the value of the results from the ordinary least squares models in Columns 4 and 5, these are still substantial effects. This is particularly significant given the overall low rate of going concern opinions within the sample (9.2% from Table 1). The ordinary least squares regressions suggest an average increase of 33.7% (3.1% / 9.2%) to the unconditional probability of a going concern opinion while the probit regressions suggest an average increase of 17.4% (1.6% / 9.2%). Given the substantial economic implications of

[11] We compute industry fixed effects using two digit SIC codes and time period fixed effects are performed by using the calendar year of the last day of the financial statements.

receiving a going concern opinion (Chen and Church 1996; Kaplan and Williams 2013; Willenborg and McKeown 2000; Allen D. Blay et al. 2011)[12], these results are economically meaningful.

We continue our analysis in Table 4. If the phenomenon we are documenting in Table 3 is real, then we should expect to see the effect moderate over time. Our econometric model in Table 3 is too coarse to detect any tapering off since a single binary variable is the variable of interest. To do this, modify the analysis in Table 3 (Columns 2 through 5) and replace $SWITCH_{it}$ with four binary variables to capture a more nuanced analysis. These are $FIRST\_YEAR_{it}$, $SECOND\_YEAR_{it}$, $THIRD\_FOURTH\_YEAR_{it}$, and $FIFTH\_SIXTH\_YEAR_{it}$. $FIRST\_YEAR_{it}$ is essentially the same measurement as $SWITCH_{it}$, it is equal to one if the observation is the first year for the auditor-client relationship. $SECOND\_YEAR_{it}$ is equal to one if it is the second year of the relationship, $THIRD\_FOURTH\_YEAR_{it}$ is equal to one if it is the third or fourth year and $FIFTH\_SIXTH\_YEAR_{it}$ is equal to one if it is the fifth or sixth year. All other observations fall into the intercept.

**INSERT TABLE 4 HERE**

To the extent that familiarity bias decreases with time, we should see our main effect moderate through each of the coefficients for these variables. The results of Table 4 appear to support this notion. For instance, in Columns 1, the coefficients for these variable begin at 0.126 for $FIRST\_YEAR_{it}$ and proceed to fall in a monotonic sense to 0.087, 0.044 and -0.038 for $SECOND\_YEAR_{it}$, $THIRD\_FOURTH\_YEAR_{it}$, and $FIFTH\_SIXTH\_YEAR_{it}$, respectively. A very similar pattern emerges in Column 2 with the inclusion of industry and time period fixed effects.

Since these two columns are the result of a probit analysis, direct comparisons of the coefficients is extremely difficult since probit coefficients are not cardinal in nature. As a result, we compute both the average marginal effects for these results as well as statistically test the differences between the coefficients. The average marginal effects for Column 1 are 0.009 ($FIRST\_YEAR_{it}$), 0.006 ($SECOND\_YEAR_{it}$), 0.003 ($THIRD\_FOURTH\_YEAR_{it}$) and -0.003

[12] Such economic implications include 1) substantial investor price reactions to a going concern opinion or a lessened reaction to a bankruptcy announcement after receiving a going concern opinion, 2) changed investor behavior to how they use the financial statements and what information they deem valuable, 3) the delisting of an initial public offering, and 4) reduced exposure to litigation costs for the auditor.

(*FIFTH_SIXTH_YEAR*$_{it}$). Average marginal effects for Column 2 are similar, 0.013, 0.010, 0.005, and -0.001 respectively. The results of Columns 3 and 4 also support the results of Columns 1 and 2. Overall, this supports a pronounced monotonic decline in the probability of a going concern as the auditor becomes more familiar with the client firm.

Statistical tests of the differences between these coefficients also support this finding. A chi-squared test of *FIRST_YEAR*$_{it}$ = *SECOND_YEAR*$_{it}$ does not yield statistical differences for either column (chi-squared = 0.98, 0.93), but the *FIRST_YEAR*$_{it}$ coefficients are statistically different from the *THIRD_FOURTH_YEAR*$_{it}$ (chi-squared = 3.47, 5.48) and the *FIFTH_SIXTH_YEAR*$_{it}$ (chi-squared = 9.05, 13.37) coefficients. The *SECOND_YEAR*$_{it}$ coefficient is not statistically different from the *THIRD_FOURTH_YEAR*$_{it}$ coefficient (chi-squared = 1.10, 2.49) but is different from the *FIFTH_SIXTH_YEAR*$_{it}$ (chi-squared = 5.31, 8.84) coefficient. Also, the *THIRD_FOURTH_YEAR*$_{it}$ coefficient is statistically different (chi-squared = 3.17, 4.52) from the *FIFTH_SIXTH_YEAR*$_{it}$ coefficient. Overall, these results support the notion of gradual changes in familiarity bias as the length of the auditor / client relationship increases over time.

If familiarity bias is a root cause of the results in Table 3, it is likely stronger in certain settings and weaker in others. Tables 5 and 6 obtain insight on such settings. One such situation might be cases where as the audit firm stays the same but perhaps a different office takes on the engagement. Another situation might be where the auditor changes and another auditor from a different city takes on the engagement. We would expect familiarity bias to be lowest when a different office of the same auditor conducts the audit, increasing when a new auditor in the same city takes on the engagement, and being highest when a new auditor from a different city takes on the engagement. The city is important because the geographic locale can convey a bevy of information to the auditor about the client and reduce familiarity bias.

In Table 5 we create three new variables to capture these potential outcomes and they displace *SWITCH*$_{it}$ from Table 3. The first is *AUDITOR_SWITCH*$_{it}$. This is a binary variable equal to one if the audit firm changed from the prior year, but the successor audit firm was from the same geographic city, zero otherwise. The second new variable is *OFFICE_SWITCH*$_{it}$. It is also a binary variable and is equal to one if the audit firm did not change from the prior year but the office of the audit firm did, zero otherwise. The third new variable is *DUAL_SWITCH*$_{it}$. It is a binary variable equal to one only if the audit firm changed from the prior year and the office of

the successor firm is from a different city than the prior audit firm.[13] Table 5 thus mimics Table 3 but with these three variables replacing $SWITCH_{it}$.

**INSERT TABLE 5 HERE**

The results in Table 5 are interesting and support our notions in regard to familiarity bias being more pronounced in certain settings. In the probit models of Columns 1 and 2, $AUDITOR\_SWITCH_{it}$ is positive and significant in Column 2. This suggests going concern opinions are more likely when there is a change in auditor, even if the successor auditor is from the same locale. $OFFICE\_SWITCH_{it}$ is also positive but statistically insignificant. As a result, we cannot determine if a change in auditor office has any impact on familiarity bias. The most impactful result lies with $DUAL\_SWITCH_{it}$, it is positive and highly significant across all four specifications. It appears as if familiarity bias is most pronounced when there is a new auditor from a different locale than the original auditor.

Interestingly and despite the fact that $AUDITOR\_SWITCH_{it}$ is positive in all cases and significant in one of them, $DUAL\_SWITCH_{it}$, aside from being statistically different from zero is also statistically different from $AUDITOR\_SWITCH_{it}$.[14] This suggests that it is the confluence of both an auditor change and a change in the auditor locale that impacts familiarity bias the most. This matches our expectations for the setting with the highest level of familiarity bias. These results and test lend support to the main findings in Table 3.

In Table 6, we conduct several cross-sectional tests to determine if additional settings cause familiarity bias on the part of auditors to ebb and flow. We speculate that familiarity bias is diminished when the auditor has extensive prior experience with similar types of client firms. Similar types of client firms would most likely be represented by client firms that are in the same industry. As a result, our initial control variable $LN\_IND\_CLIENTS_{it}$ is an excellent variable to interact with $SWITCH_{it}$. If industry exposure reduces familiarity bias, we expect this variable to

[13] The formulation of these variables essentially breaks the initial variable of interest, $SWITCH_{it}$, down into two components, $AUDITOR\_SWITCH_{it}$ and $DUAL\_SWITCH_{it}$. In our sample of 35,188 observations, 2,923 are coded as a one for $SWITCH_{it}$. Of these, 1,644 are where the audit firm was replaced by a successor firm in the same city ($AUDITOR\_SWITCH_{it} = 1$) and 1,279 were instances where the audit firm was replaced by a successor firm in a different city ($DUAL\_SWITCH_{it} = 1$). There are also 1,253 observations whereas the audit firm did not change but the office location did ($OFFICE\_SWITCH_{it} = 1$).

[14] Chi-squared tests of Columns 1 and 2 support this with chi-squared values of 14.35 and 12.72, respectively. The same can be said for the OLS regressions in Columns 3 and 4, f-tests of $DUAL\_SWITCH_{it} = AUDITOR\_SWITCH_{it}$ result in f-statistics of 31.74 and 30.43, respectively.

have a moderating impact upon our main effect that a change in auditor increases the likelihood of a going concern opinion.

In addition to $LN\_IND\_CLIENTS_{it}$, we also create to new variable loosely related to $LN\_IND\_CLIENTS_{it}$ to also use in cross-sectional tests. The first is $SPECIALIST_{it}$; it is a binary variable equal to one if the auditor for an observation has at least 25% of the overall clientele for a particular two digit SIC code for a given calendar year. The second is $MKT\_SHARE_{it}$; it is a continuous variable that represents the overall percentage of client firms the auditor services within a two digit SIC code for a given calendar year.[15] By using these additional variables, we obtain a more nuanced cross-sectional examination of familiarity bias in an audit setting.

**INSERT TABLE 6 HERE**

Table 6 has 12 columns, four for each of the three interactions. Two are probit regressions and two are OLS regressions. Each probit and OLS regression has a version with and without industry and time period fixed effects. Columns 1 through 6 are the probit regressions and Columns 7 through 12 are the OLS regressions. All controls from Table 3 have been employed but their output has been suppressed to make Table 6 easier to read and more parsimonious.

The interaction terms are negative and significant in 10 of the 12 specifications. The only Columns not achieving statistical significance are Columns 3 and 4 whereas $SPECIALIST_{it}$ was interacted with $SWITCH_{it}$ in a probit specification.[16] This interaction is highly significant in the OLS regressions, though. In all cases, the negative nature of the coefficients for these interaction terms suggests that an auditor with industry expertise or existing clientele within the industry is less likely to issue a going concern for a first time audit than is a first time auditor with little or no industry experience. Familiarity bias appears to be higher in those instances. This further supports our underlying theory and the hypothesis initially tested in Table 3.

### E. Additional Analysis

If familiarity bias impacts going concern reporting as reported in Tables 3 through 6, it is possible that it influences other auditor decision processes. While the standard auditor reporting

[15] While related to $LN\_IND\_CLIENTS_{it}$, these variables are not the same construct. $SPECIALIST_{it}$ correlates with $LN\_IND\_CLIENTS_{it}$ at the 0.108 level and $MKT\_SHARE_{it}$ correlates with $LN\_IND\_CLIENTS_{it}$ at the 0.515 level.
[16] This is not entirely surprising given the coarse nature of this variable. Measuring industry specialization has been heavily debated with auditing research.

model (i.e., unmodified opinion, adverse opinion, disclaimer of opinion) is not palatable for public company reporting purposes and does not give rise to cross sectional differences for empirical testing, other requirements of the financial reporting process may do so. One such setting is Section 404 reporting and the requirement that auditors must place an opinion on the audit client's internal control processes and effectiveness. Internal control is a much more "gray" area than financial reporting, giving rise to even greater auditor discretion. This discretion could possibly allow auditor bias, through familiarity bias, to manifest itself.

To explore this notion we employ our primary econometric model from Table 3. However, we remove going concern opinions ($GC_{it}$) as the dependent variable and replace it with another binary variable, $IC\_INEFFECTIVE_{it}$.[17] $IC\_INEFFECTIVE_{it}$ equals a one if the auditor deemed the client's internal control to be ineffective for the reporting period. It is also possible that the auditor has the discretion to cite more than one weakness in internal control. We thus modify the econometric specification to incorporate a count variable, $IC\_WEAKNESS\_COUNT_{it}$, as the dependent variable. We expect a change in auditor and the increased lack of familiarity that comes with such a change to function similar in this econometric specification to that of Table 3. $SWITCH_{it}$ should be positively related to ineffective internal controls, both in existence and magnitude. Table 7 details this analysis.

**INSERT TABLE 7 HERE**

Columns 1 and 2 of Table 7 reperform the model of Table 3 with $IC\_INEFFECTIVE_{it}$ as the dependent variable using probit regression. Columns 3 and 4 replicate these using OLS regression. Columns 2 and 4 employ industry and time period fixed effects via indicator variables. Columns 5 and 6 utilize $IC\_WEAKNESS\_COUNT_{it}$ as the dependent variable and use Poisson regression as a result.

Across all specifications, $SWITCH_{it}$ is positive and highly statistically significant, despite the much lower explanatory power (i.e., lower r-squared) values of these models. This lends further support to the notion that familiarity bias impacts auditor reporting decisions.

These results have substantial economic impact. An average marginal effects analysis for Columns 1 and 2 results in average marginal effects coefficients of 0.019 and 0.020, respectively.

[17] We also make $GC_{it}$ a control variable for these analyses.

Since ineffective internal controls appear in only 2.8% of the sample, a first year audit raises the unconditional probability significantly at 67.8% (1.9% / 2.8%) and 71.4% (2.0% / 2.8%) for Columns 1 and 2, respectively. The results for Columns 5 and 6 also further support this story; the number of internal control weaknesses also appears to be heavily influenced by an auditor's familiarity bias.

We also perform several untabulated analyses. In rendering an opinion that internal controls are ineffective, the auditor has several routes with which to make that determination. One route would be the judgment that the client simply misapplied the appropriate financial reporting framework. Another would result from an incident of fraud or deliberate misrepresentations on the part of management. A third route would be that internal control is simply not properly designed, resulting in a lack of separation of duties. The Audit Analytics database codes instances where internal control has been ineffective along these three dimensions.[18] We thus create three additional binary variables, $RULE\_FAILURE_{it}$, $FRAUD\_IRREG_{it}$, and $IC\_WEAK_{it}$ to capture these variables, respectively. We then reperform Columns 1 and 2 of Table 7 with each of these as dependent variables.

The results overwhelmingly support the notion that a change in auditor positively impacts the instance of misapplication of the financial reporting framework ($RULE\_FAILURE_{it}$) and a flaw in internal control systems ($IC\_WEAK_{it}$) as all coefficients are positive and highly significant from a statistical standpoint (p-value < 0.01). However, fraud and other financial reporting irregularities ($FRAUD\_IRREG_{it}$) does not attain a result. We interpret these results as supporting our findings in Table 7, the two instances with results in this analysis are most likely the two with the most auditor judgment. Furthermore, an auditor would not likely accuse a client of fraud unless it is essentially clear from the facts before them. The uncertainty of how accounting rules are applied and whether internal control systems are adequate would give enough leeway for auditor familiarity bias to potentially manifest in rendering an opinion that overall internal control is ineffective.

## IV. Additional Robustness Tests

[18] An observation with ineffective internal control could have one of these or all of them as underlying reasons for ineffective control.

## A. Fixed Effects Models

We further explore our results with a heightened level of econometric rigor and introduce auditor fixed effects to our analysis in Table 3. Auditor fixed effects allow us, in theory, to control for invariant auditor traits, including the propensity to issue a going concern report. We first replicate Columns 2 through 5 of Table 3, employing an indicator variable for each audit firm.

When this is performed, the results of Table continue to hold. For instance, the coefficients of $SWITCH_{it}$ for Columns 2 and 3 become 0.145 and 0.162, respectively, and remain statistically significant at the p-value <0.01 level.[19] The same pattern holds for the replication of Columns 4 and 5 (OLS regressions). Our primary results are thus robust to the inclusion of auditor fixed effects.

We also replicate these analyses with the inclusion of audit client firm fixed effects to control for latent invariant traits at the client-firm level. The results for Columns 2 and 3 of Table 3 continue to hold, the coefficients of $SWITCH_{it}$ become 0.170 and 0.179, respectively and retain statistical significance at the p-value <0.10 level.[20] Replication of Columns 4 and 5 of Table 3 using audit client firm fixed effects also hold with positive coefficients that are statistically significant at the p-value < 0.05 levels. Overall, these fixed effects analyses support the notion that latent and endogenous traits at either the auditor level or the audit client level are not driving our primary results within this manuscript.

## B. Lagged Versions of the Dependent Variable

Another robustness analysis we conduct is to re-perform our main analysis in Table 3 with the prior year's value for $GC_{it}$, as an additional control variable. While this type of econometric specification is not common in research whereas going concern opinion outcomes are the dependent variable, we perform this robustness analysis for a couple of reasons. First of all, financially distressed firms tend to be distressed for long periods of time. Second, the issuance of a going concern opinion in the prior year likely makes it easier for an auditor to issue one in the current year, especially if the current year auditor is a new one. Prior literature has identified some evidence that the issuance of a going concern report may lead to a subsequent change in an auditor

[19] These analyses do cause a small drop in sample size as the dependent variable is invariant for some auditors.
[20] The sample size drops dramatically for these tests as many audit client firms never experience a going concern report modification. The sample size drops to 4,130 audit client firm-year observations.

(Carey et al. 2008). Consecutive going concern opinion modification issuances have been associated with audit firms' lack of available knowledge and resources (Harris, Omer, and Wong 2019). By controlling for a prior going concern opinions, we control for this potential threat to our research design. This adds an additional layer of rigor above and beyond the extensive amount of controls already in place in our research design to control for the client-firm's level of financial distress.

We replicate Table 3 (untabulated) with the inclusion of the prior year's going concern opinion. For Columns 2 and 3, $SWITCH_{it}$ continues to display positive coefficients (0.161 and 0.191, respectively) which are both highly significant at the p-value < 0.01 level. The same holds for replication of Columns 4 and 5 of Table 3 (OLS regressions), the coeffcients also remain positive and are also statistically significant at the p-value < 0.01 level. As expected and throughout these four regressions, the coefficient for $GC_{it-1}$ is positive and highly significant, indicating substantial serial correlation in going concern behavior on the part of auditors.[21] An average marginal effects analysis reveals that a going concern opinion in the prior year raises the likelihood of one in the current year by 9.6%, a very substantial effect.

**C. Drop Initial Observations**

In our original coding for the dataset, we retained all observations for which it was the first year in the Compustat dataset (i.e., ipo and spinoff firms) but coded these with $SWITCH_{it}$ equaling zero. While many of these firms likely retain their original auditor, it is impossible to determine if that is the case or not. We thus conduct a robustness analysis dropping these observations from the overall dataset. When this is performed, our overall inferences remain unchanged throughout our analyses.

**D. Two-Way Clustering**

Our main econometric specification clusters the standard errors at the client-firm level. This was done since the depth of our panel is not very long (Petersen 2009). However, we do replicate our main findings utilizing two way clustering over the time and audit client firm dimensions, both

[21] For instance, in a replication of Column 3 of Table 3, the coefficient for $GC_{it-1}$ is 1.928 and has a z-statistic of 35.49.

with and without the time period dummy control variables. When this is performed, all of our inferences remain unchanged.

**E. Going Concern Error Rates**

While it is not a central feature of our manuscript, prior literature has focused heavily on going concern error rates (i.e., issuing a going concern when one was not warranted and no subsequent bankruptcy occurred or not issuing a going concern when one was warranted and evidence exists of subsequent business failure) by typically limiting the sample to distressed or bankrupt firms. While a comprehensive bankruptcy database does not exist for the breadth of our sample (2008 – 2017), we employ a proxy measure to identify firms most at risk for business failure. First we identify, by two digit SIC code, client firm-years that are in the upper one third in terms of financial leverage and in the lower one third in terms of the current ratio and the market to book ratio. These are preliminary markers of financial distress. We then code the identified observations meeting these three criteria as "distressed" if that particular client firm goes "dark" within the next year.[22]

After identifying these "distressed" observations, we then code two types of going concern errors. We call the first a type I error, not receiving a going concern opinion when our metric for distress suggests one should be in place. We call the second error a type II error and it occurs when a going concern opinion is issued but one does not appear to be warranted by our measure of distress. Within our sample, this results in 198 type I errors and 1,972 type II errors. Type II errors appear to be much more prevalent and are likely due the propensity of a going concern to insulate the auditor from unwanted litigation, etc. Our documented phenomena thus far in the paper would support this notion.

When then take these two error variables and use them as the dependent variable in the econometric models of Table 3. When this is done, $SWITCH_{it}$ is positive and statistically significant for the regressions involving our type II error variable; they are statistically insignificant for our type I

[22] We define going "dark" has not having a subsequent observations in the Compustat dataset. Firms that go "dark" either 1) went private, 2) were acquired, 3) went bankrupt, or 4) were delisted from public exchanges. While not all of these outcomes might be the result of a going concern issue, typically bankruptcy, delisting and many acquisitions are driven by the fact that the subject firm is heavily distressed. Taking a firm private can also be the result of going concern pressures as management attempts to alleviate the firm from pressures that come with being a public company while they attempt to execute a turn-around plan.

error variable. This further supports the notion that auditors are being more cautious in their first year of an engagement; familiarity bias appears to be having an impact.

## V. Conclusion

In this manuscript, we explore whether familiarity bias manifests beyond the realm of investors and has an influential impact upon an important information intermediary and monitor, auditors. For a choice of setting, we employ going concern audit opinions for empirical testing. This setting is an excellent avenue to test familiarity bias since auditors have a great deal of discretion in terms of when they can issue a going concern opinion.

Our primary tests indicate that familiarity bias does impact auditors. Auditors are more likely to issue a going concern opinion in their initial year with a client, a time at which their familiarity bias is likely the highest. This phenomenon appears to slowly dissipate over a period of approximately five years as the auditor becomes more acclimated to the client. It also appears to be moderated in situations whereas the auditor is more likely to already be familiar with the client. Such situations include instances where the auditor already has extensive industry exposure or expertise. Further supporting our familiarity bias hypothesis, our main effect is the strongest when the successor auditor comes from a different locale than the previous auditor. Our primary finding also extends to Section 404 internal control reporting; auditors are more likely to cite ineffective internal control s when they are unfamiliar with a client.

These results are robust to numerous client level financial controls, differing econometric models and specifications and different ways to compute standard errors. They are also robust to auditor and client-level fixed effects analyses, as well as the inclusion of the prior period's going concern decision as an additional control variable in the econometric specification. In further testing, it appears as if changes in auditors are primarily driving excessive going concern behavior but leading to increases in instances where a going concern should have been issued but was not.

Overall, these findings should be of interest and use to several parties. To the users of financial reports, we reveal a previous undisclosed form of bias in those reports. To auditors, we may make them more conscious of the biases that dictate their decision patterns. To academics, we

continue a lengthy and robust stream of literature in regard to familiarity bias and how it impacts the economic decisions of individuals.

## APPENDIX

| | |
|---|---|
| $GC_{it}$ | Binary variable equal to one if the auditor client firm-year received a going concern modification to its annual initial audit report, zero otherwise. Obtained from form *10-K*, *10-K405*, *10KSB*, *10KSB40*, or *10-KT* in the Audit Analytics database (variable = *GoingConcern*). |
| $SWITCH_{it}$ | Binary variable equal to one if the auditor differs from the prior year auditor within the Audit Analytics database (variable = *AuditorKey*), zero otherwise. Initial observations for a firm-year are coded as a zero since an actual change in auditor is not observed. |
| $LN\_AGE_{it}$ | Continuous variable equal to the natural log of the difference between the calendar year of the observation and the calendar year of the observation's initial public offering (Compustat variable *ipodate*) plus one. |
| $LN\_AT_{it}$ | Continuous variable equal to the natural log of the observation's total assets (Compustat variable *at*). |
| $ABNORMAL\_FEES\_PCT_{it}$ | Continuous variable equal to the difference between total predicted fees (both audit and non-audit fees, Audit Analytics variable *TotalFees*) and actual total fees, divided by actual total fees. Predicted total fees calculated using linear regression with total fees as the dependent variable and all other covariates as predictor variables. |
| $CLIENT\_IMPORTANCE_{it}$ | Continuous variable equal to the total fees (Audit Analytics variable *TotalFees*) for the audit client for the year divided by the sum of the total fees for all audit client firms of the auditor for the calendar year. |
| $LEVERAGE_{it}$ | Continuous variable equal to total liabilities (Compustat variable *lt*) divided by total assets (Compustat variable *at*). |

| | |
|---|---|
| $LOSS_{it}$ | Binary variable equal to one if net income (Compustat variable *ni*) is negative, zero otherwise. |
| $ROA_{it}$ | Continuous variable equal to net income before special items (Compustat variables *ni* and *spi*) divided by total assets (Compustat variable *at*). |
| $INT\_COVERAGE_{it}$ | Continuous variable equal to interest expense (Compustat variable *xint*) divided by net income before interest and taxes (Compustat variables *ni*, *txt*, and *xint*). |
| $GROWTH_{it}$ | Continuous variable equal to the current year revenues (Compustat variable *revt*) minus the prior year revenues, divided by prior year revenues. |
| $CURRENT\_RATIO_{it}$ | Continuous variable equal to current assets (Compustat variable *act*) divided by current liabilities (Compustat variable *lct*). |
| $MKTBK_{it}$ | Continuous variable equal to the market value of assets (Compustat variable *mkvalt* + Compustat variable *lt*) divided by the book value of assets (Compustat variable *at*). |
| $ALTMAN_{it}$ | Continuous variable equal to the observation's Altman Z-Score, as promulgated by Altman (1968). |
| $INVESTMENTS_{it}$ | Continuous variable equal to the observations cash and short term investments (Compustat variable *che*) divided by total assets (Compustat variable *at*). |
| $BIGN_{it}$ | Binary variable equal to one if the observation's auditor is one of the "big four" audit firms (i.e., Deloitte, EY, PWC, or KPMG). Derived from Audit Analytics variable *AuditorKey*. |
| $IC\_INEFFECTIVE_{it}$ | Binary variable equal to one if the observation's auditor deemed internal controls to be ineffective (Audit Analytics variable *EffectiveInternalControls*), zero otherwise. |

| | |
|---|---|
| $LN\_IND\_CLIENTS_{it}$ | Continuous variable equal to the natural log of the number of audit clients that the observation's auditor serviced in that given calendar year. |
| $FIRST\_YEAR_{it}$ | Binary variable equal to one if the observation is the initial year of an auditor client relationship, zero otherwise. Equivalent to $SWITCH_{it}$. |
| $SECOND\_YEAR_{it}$ | Binary variable equal to one if the observation is the second year of an auditor client relationship, zero otherwise. |
| $THIRD\_FOURTH\_YEAR_{it}$ | Binary variable equal to one if the observation is the third or fourth year of an auditor client relationship, zero otherwise. |
| $FIFTH\_SIXTH\_YEAR_{it}$ | Binary variable equal to one if the observation is the fifth or sixth year of an auditor client relationship, zero otherwise. |
| $AUDITOR\_SWITCH_{it}$ | Binary variable equal to one if the observation's audit firm (Audit Analytics variable *AuditorKey*) is different from the prior year, but the new auditor is from the same locale (city) (Audit Analytics variable *AuditorCity*), zero otherwise. |
| $OFFICE\_SWITCH_{it}$ | Binary variable equal to one if the observation's audit firm (Audit Analytics variable *AuditorKey*) is same as the prior year, but the audit team or partner is from a different locale (city) (Audit Analytics variable *AuditorCity*) than the prior year, zero otherwise. |
| $DUAL\_SWITCH_{it}$ | Binary variable equal to one if the observation's audit firm (Audit Analytics variable *AuditorKey*) is different from the prior year and the audit team or partner is from a different locale (city) (Audit Analytics variable *AuditorCity*) than the prior year, zero otherwise. |
| $SPECIALIST_{it}$ | Binary variable equal to one if the observation's audit firm has at least 25% of the audit clientele for the particular two digit SIC code for the calendar year, zero otherwise. |

| | |
|---|---|
| $MKT\_SHARE_{it}$ | Continuous variable equal to the percentage, for a given calendar year, of the number of audit clients within the two digit SIC code of the observation's auditor relative to the total audit clients within the same two digit SIC code for the same calendar year. |
| $IC\_WEAKNESS\_COUNT_{it}$ | Count variable equal to the number of identified internal control weakness for the observation (Audit Analytics variable *InternalControlNumberWeakness)*. |
| $RULE\_FAILURE_{it}$ | Binary variable equal to one if the observation's audit firm deemed an internal control weakness to be the result of the misapplication of the pertinent financial reporting framework (e.g., GAAP, IFRS) (Audit Analytics variable *AccountingRuleGAAPFASBAppl*), zero otherwise. |
| $FRAUD\_IRREG_{it}$ | Binary variable equal to one if the observation's audit firm deemed an internal control weakness to be the result of fraud or other accounting "irregularities" (Audit Analytics variable *FinancialFraudIrregularities*), zero otherwise. |
| $IC\_WEAK_{it}$ | Binary variable equal to one if the observation's audit firm deemed an internal control weakness to be the result of an absence or breakdown in internal control (e.g., separation of duties) (Audit Analytics variable *InternalControlWeakness*), zero otherwise. |

## Table 1: Descriptive Statistics

Table 1 presents the descriptive statistics for the full sample of 35,188 firm-year observations. The sample period begins with firm-years ending in calendar year 2008 and ends with all firm-years ending in calendar year 2017. All continuous variables have been winsorized at the 0.01 and 0.99 levels and are defined in the Appendix.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| | | | | *SWITCH* = 0 | *SWITCH* = 1 | | |
| | Mean | Median | Std. Dev. | Mean | Mean | Difference | T-Stat |
| *GC* | 0.092 | 0.000 | 0.289 | 0.081 | 0.220 | -0.139 | -25.181 *** |
| *SWITCH* | 0.083 | 0.000 | 0.276 | n/a | n/a | n/a | n/a |
| *LN_AGE* | 2.568 | 2.773 | 0.847 | 2.583 | 2.401 | 0.182 | 11.157 *** |
| *LN_AT* | 6.036 | 6.340 | 2.654 | 6.188 | 4.251 | 1.937 | 36.514 *** |
| *ABNORMAL_FEES_PCT* | 0.157 | 0.010 | 0.676 | 0.153 | 0.225 | -0.072 | -5.549 *** |
| *CLIENT_IMPORTANCE* | 0.042 | 0.001 | 0.135 | 0.039 | 0.071 | -0.032 | -12.029 *** |
| *LEVERAGE* | 0.835 | 0.589 | 1.592 | 0.805 | 1.171 | -0.366 | -11.917 *** |
| *LOSS* | 0.360 | 0.000 | 0.480 | 0.347 | 0.505 | -0.158 | -17.050 *** |
| *ROA* | -0.214 | 0.012 | 1.066 | -0.183 | -0.556 | 0.373 | 18.183 *** |
| *INT_COVERAGE* | 0.018 | 0.140 | 0.696 | 0.146 | 0.069 | 0.077 | 5.701 *** |
| *GROWTH* | 0.180 | 0.045 | 0.859 | 0.169 | 0.296 | -0.127 | -7.637 *** |
| *CURRENT_RATIO* | 1.449 | 2.370 | 2.678 | 2.373 | 2.34 | 0.033 | 0.642 |
| *MKTBK* | 3.053 | 1.375 | 7.165 | 2.907 | 4.667 | -1.76 | -12.746 *** |
| *ALTMAN* | -1.138 | 1.649 | 24.626 | -0.599 | -7.089 | 6.49 | 13.680 *** |
| *INVESTMENTS* | 0.184 | 0.088 | 0.227 | 0.183 | 0.193 | -0.010 | -2.358 ** |
| *BIGN* | 0.560 | 1.000 | 0.496 | 0.593 | 0.190 | 0.403 | 43.096 *** |
| *IC_INEFFECTIVE* | 0.028 | 0.000 | 0.166 | 0.027 | 0.045 | -0.018 | -5.791 *** |
| *LN_IND_CLIENTS* | 2.421 | 2.639 | 1.514 | 2.496 | 1.601 | 0.895 | 31.018 *** |

## Table 2: Univariate Correlation Matrix

Table 2, presents a pairwise correlation coefficient matrix for the full sample of 35,188 firm-year observations within our primary sample. All variables are defined in the Appendix. All statistically significant relations (p-value < 0.10) are denoted in bold and italics.

| | GC | SWITCH | LN_AGE | LN_AT | ABNORMAL_FEES_PCT | CLIENT_IMPORTANCE | LEVERAGE | LOSS | ROA | INT_COVERAGE | GROWTH | CURRENT_RATIO | MKTBK | ALTMAN | INVESTMENTS | BIGN | IC_INEFFECTIVE | LN_IND_CLIENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *GC* | ***1.000*** | | | | | | | | | | | | | | | | | |
| *SWITCH* | ***0.133*** | ***1.000*** | | | | | | | | | | | | | | | | |
| *LN_AGE* | ***-0.124*** | ***-0.059*** | ***1.000*** | | | | | | | | | | | | | | | |
| *LN_AT* | ***-0.511*** | ***-0.191*** | ***0.222*** | ***1.000*** | | | | | | | | | | | | | | |
| *ABNORMAL_FEES_PCT* | ***-0.069*** | ***0.030*** | ***-0.029*** | 0.004 | ***1.000*** | | | | | | | | | | | | | |
| *CLIENT_IMPORTANCE* | ***0.116*** | ***0.064*** | ***-0.022*** | ***-0.251*** | ***0.047*** | ***1.000*** | | | | | | | | | | | | |
| *LEVERAGE* | ***0.495*** | ***0.063*** | ***-0.054*** | ***-0.351*** | ***-0.140*** | ***0.069*** | ***1.000*** | | | | | | | | | | | |
| *LOSS* | ***0.378*** | ***0.091*** | ***-0.200*** | ***-0.464*** | ***0.011*** | ***0.054*** | ***0.193*** | ***1.000*** | | | | | | | | | | |
| *ROA* | ***-0.570*** | ***-0.097*** | ***0.129*** | ***0.485*** | ***0.133*** | ***-0.073*** | ***-0.789*** | ***-0.336*** | ***1.000*** | | | | | | | | | |
| *INT_COVERAGE* | ***-0.146*** | ***-0.030*** | ***0.012*** | ***0.193*** | 0.007 | ***-0.023*** | ***-0.087*** | ***-0.196*** | ***0.125*** | ***1.000*** | | | | | | | | |
| *GROWTH* | ***0.080*** | ***0.041*** | ***-0.172*** | ***-0.101*** | ***0.024*** | ***0.025*** | 0.003 | ***0.070*** | ***-0.062*** | ***-0.027*** | ***1.000*** | | | | | | | |
| *CURRENT_RATIO* | ***-0.161*** | -0.003 | ***-0.050*** | ***-0.158*** | ***0.116*** | ***0.019*** | ***-0.228*** | ***0.067*** | ***0.112*** | ***-0.071*** | ***0.040*** | ***1.000*** | | | | | | |
| *MKTBK* | ***0.428*** | ***0.068*** | ***-0.107*** | ***-0.433*** | ***-0.098*** | ***0.052*** | ***0.656*** | ***0.206*** | ***-0.686*** | ***-0.109*** | ***0.080*** | ***-0.063*** | ***1.000*** | | | | | |
| *ALTMAN* | ***-0.522*** | ***-0.073*** | ***0.034*** | ***0.391*** | ***0.159*** | ***-0.065*** | ***-0.841*** | ***-0.254*** | ***0.819*** | ***0.089*** | 0.007 | ***0.261*** | ***-0.547*** | ***1.000*** | | | | |
| *INVESTMENTS* | ***0.050*** | ***0.013*** | ***-0.173*** | ***-0.360*** | ***-0.034*** | -0.008 | ***-0.027*** | ***0.276*** | ***-0.123*** | ***-0.147*** | ***0.093*** | ***0.547*** | ***0.189*** | 0.001 | ***1.000*** | | | |
| *BIGN* | ***-0.266*** | ***-0.222*** | ***0.099*** | ***0.548*** | ***-0.060*** | ***-0.341*** | ***-0.173*** | ***-0.180*** | ***0.215*** | ***0.060*** | ***-0.053*** | -0.005 | ***-0.158*** | ***0.188*** | -0.006 | ***1.000*** | | |
| *IC_INEFFECTIVE* | ***-0.010*** | ***0.031*** | 0.001 | ***0.024*** | ***0.017*** | ***-0.016*** | ***-0.018*** | ***0.035*** | ***0.019*** | -0.008 | 0.009 | -0.007 | ***-0.014*** | ***0.018*** | ***-0.011*** | ***0.021*** | ***1.000*** | |
| *LN_IND_CLIENTS* | ***-0.280*** | ***-0.163*** | ***0.014*** | ***0.482*** | ***-0.048*** | ***-0.415*** | ***-0.180*** | ***-0.161*** | ***0.209*** | ***0.091*** | ***-0.029*** | ***0.010*** | ***-0.173*** | ***0.186*** | ***0.058*** | ***0.575*** | ***0.032*** | ***1.000*** |

## Table 3: Primary Hypothesis Tests

Table 3 presents the results of our primary hypothesis test. The variable of interest in this table is $SWITCH_{it}$, and the dependent variable is $GC_{it}$. Columns 1 through 3 employ probit regression and columns 4 and 5 employ OLS regression. Column 1 omits $SWITCH_{it}$ to show the results without the variable of interest. Columns 2 and 4 do not include industry and time period fixed effects while Columns 3 and 5 do. All variables are defined in the Appendix. Robust two-tailed z and t-statistics are presented in parentheses below the coefficients. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All standard errors are clustered at the firm level.

| | (1)<br>*GC* | (2)<br>*GC* | (3)<br>*GC* | (4)<br>*GC* | (5)<br>*GC* |
|---|---|---|---|---|---|
| *SWITCH* | | 0.201*** | 0.229*** | 0.030*** | 0.031*** |
| | | (5.138) | (5.760) | (5.380) | (5.598) |
| *LN_AGE* | -0.111*** | -0.108*** | -0.115*** | -0.002 | -0.003 |
| | (-4.541) | (-4.429) | (-4.583) | (-0.721) | (-1.528) |
| *LN_AT* | -0.287*** | -0.286*** | -0.337*** | -0.032*** | -0.034*** |
| | (-16.821) | (-16.700) | (-17.347) | (-22.105) | (-21.988) |
| *ABNORMAL_FEES_PCT* | 0.004 | -0.000 | 0.002 | -0.002 | -0.002 |
| | (0.136) | (-0.014) | (0.055) | (-0.710) | (-0.710) |
| *CLIENT_IMPORTANCE* | -0.006 | 0.003 | -0.086 | -0.004 | -0.023 |
| | (-0.044) | (0.020) | (-0.644) | (-0.226) | (-1.153) |
| *LEVERAGE* | 0.155*** | 0.157*** | 0.169*** | 0.012*** | 0.014*** |
| | (3.183) | (3.211) | (3.583) | (3.398) | (3.866) |
| *LOSS* | 0.914*** | 0.911*** | 0.956*** | 0.083*** | 0.075*** |
| | (19.278) | (19.188) | (18.062) | (19.823) | (17.930) |
| *ROA* | -0.325*** | -0.325*** | -0.266*** | -0.065*** | -0.062*** |
| | (-5.873) | (-5.820) | (-5.317) | (-13.097) | (-12.755) |
| *INT_COVERAGE* | -0.039** | -0.038** | -0.038** | -0.013*** | -0.013*** |
| | (-2.273) | (-2.232) | (-2.168) | (-5.980) | (-5.578) |
| *GROWTH* | 0.024* | 0.023* | 0.016 | 0.011*** | 0.009*** |
| | (1.927) | (1.842) | (1.247) | (4.902) | (3.980) |
| *CURRENT_RATIO* | -0.127*** | -0.126*** | -0.136*** | -0.013*** | -0.015*** |
| | (-6.182) | (-6.154) | (-6.078) | (-13.698) | (-14.102) |
| *MKTBK* | -0.008** | -0.008** | -0.008** | 0.001 | 0.000 |
| | (-2.217) | (-2.235) | (-2.381) | (1.305) | (0.948) |
| *ALTMAN* | -0.002 | -0.002 | -0.001 | -0.001*** | -0.001*** |
| | (-1.157) | (-1.151) | (-0.577) | (-3.303) | (-2.919) |
| *INVESTMENTS* | -0.571*** | -0.562*** | -0.608*** | -0.084*** | -0.086*** |
| | (-5.240) | (-5.145) | (-5.136) | (-6.554) | (-6.243) |
| *BIGN* | 0.122** | 0.145** | 0.270*** | 0.021*** | 0.035*** |
| | (2.038) | (2.406) | (3.834) | (5.282) | (6.371) |
| *IC_INEFFECTIVE* | 0.303*** | 0.292*** | 0.319*** | -0.007 | -0.007 |
| | (3.603) | (3.473) | (3.576) | (-0.795) | (-0.790) |
| *LN_IND_CLIENTS* | -0.044** | -0.043** | -0.072*** | -0.008*** | -0.016*** |
| | (-2.296) | (-2.224) | (-2.794) | (-5.883) | (-5.533) |
| Model | Probit | Probit | Probit | OLS | OLS |
| Constant | Yes | Yes | Yes | Yes | Yes |
| Industry FE's | No | No | Yes | No | Yes |
| Year FE's | No | No | Yes | No | Yes |
| N | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 |
| R-squared | 0.569 | 0.570 | 0.590 | 0.449 | 0.460 |

## Table 4: Analyses over Time

Table 4 modifies the tests of Table 3 to identify trends over time. The variables of interest in this table are $FIRST\_YEAR_{it}$, $SECOND\_YEAR_{it}$, $THIRD\_FOURTH\_YEAR_{it}$ and $FIFTH\_SIXTH\_YEAR_{it}$. Columns 1 and 2 employ probit regression and columns 3 and 4 employ OLS regression. Columns 1 and 3 do not include industry and time period fixed effects while Columns 2 and 4 do. All variables are defined in the Appendix. Robust two-tailed z and t-statistics are presented in parentheses below the coefficients. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All standard errors are clustered at the firm level.

| | (1)<br>*GC* | (2)<br>*GC* | (3)<br>*GC* | (4)<br>*GC* |
|---|---|---|---|---|
| *FIRST_YEAR* | 0.126** | 0.182*** | 0.011* | 0.011* |
| | (2.153) | (3.061) | (1.840) | (1.899) |
| *SECOND_YEAR* | 0.087 | 0.144** | 0.007 | 0.007 |
| | (1.487) | (2.393) | (1.358) | (1.243) |
| *THIRD_FOURTH_YEAR* | 0.044 | 0.077 | -0.001 | -0.001 |
| | (0.822) | (1.413) | (-0.125) | (-0.246) |
| *FIFTH_SIXTH_YEAR* | -0.039 | -0.024 | -0.014*** | -0.013*** |
| | (-0.719) | (-0.436) | (-3.609) | (-3.230) |
| *LN_AGE* | -0.089*** | -0.085*** | -0.000 | -0.002 |
| | (-3.274) | (-3.081) | (-0.150) | (-0.847) |
| *LN_AT* | -0.286*** | -0.337*** | -0.033*** | -0.034*** |
| | (-16.680) | (-17.319) | (-22.268) | (-22.107) |
| *ABNORMAL_FEES_PCT* | 0.003 | 0.006 | -0.002 | -0.002 |
| | (0.112) | (0.194) | (-0.624) | (-0.621) |
| *CLIENT_IMPORTANCE* | 0.004 | -0.081 | -0.005 | -0.025 |
| | (0.028) | (-0.607) | (-0.276) | (-1.214) |
| *LEVERAGE* | 0.155*** | 0.168*** | 0.012*** | 0.014*** |
| | (3.167) | (3.527) | (3.375) | (3.840) |
| *LOSS* | 0.915*** | 0.961*** | 0.084*** | 0.075*** |
| | (19.310) | (18.189) | (19.923) | (18.027) |
| *ROA* | -0.326*** | -0.267*** | -0.065*** | -0.062*** |
| | (-5.836) | (-5.322) | (-13.107) | (-12.771) |
| *INT_COVERAGE* | -0.038** | -0.038** | -0.013*** | -0.012*** |
| | (-2.238) | (-2.170) | (-5.933) | (-5.547) |
| *GROWTH* | 0.023* | 0.014 | 0.011*** | 0.009*** |
| | (1.777) | (1.127) | (4.869) | (3.958) |
| *CURRENT_RATIO* | -0.127*** | -0.137*** | -0.013*** | -0.015*** |
| | (-6.173) | (-6.104) | (-13.738) | (-14.135) |
| *MKTBK* | -0.008** | -0.008** | 0.001 | 0.000 |
| | (-2.218) | (-2.350) | (1.244) | (0.905) |
| *ALTMAN* | -0.002 | -0.001 | -0.001*** | -0.001*** |
| | (-1.181) | (-0.619) | (-3.345) | (-2.951) |
| *INVESTMENTS* | -0.564*** | -0.608*** | -0.084*** | -0.086*** |
| | (-5.164) | (-5.129) | (-6.594) | (-6.270) |
| *BIGN* | 0.142** | 0.279*** | 0.018*** | 0.033*** |
| | (2.349) | (3.952) | (4.664) | (5.883) |
| *IC_INEFFECTIVE* | 0.297*** | 0.324*** | -0.006 | -0.005 |
| | (3.549) | (3.648) | (-0.646) | (-0.627) |
| | 0.000 | 0.000 | 0.518 | 0.531 |
| *LN_IND_CLIENTS* | -0.043** | -0.072*** | -0.008*** | -0.016*** |
| | (-2.208) | (-2.807) | (-5.867) | (-5.568) |
| | 0.027 | 0.005 | 0.000 | 0.000 |
| Model | Probit | Probit | OLS | OLS |
| Constant | Yes | Yes | Yes | Yes |
| Industry FE's | No | Yes | No | Yes |
| Year FE's | No | Yes | No | Yes |
| N | 35,188 | 35,188 | 35,188 | 35,188 |
| R-squared | 0.569 | 0.590 | 0.449 | 0.460 |

## Table 5: Changes in Auditor and Auditor Location

Table 5 modifies the tests of Table 3 to identify whether familiarity bias is influenced by the auditor's location. The variables of interest in this table are $AUDITOR\_SWITCH_{it}$, $OFFICE\_SWITCH_{it}$, and $DUAL\_SWITCH_{it}$. Columns 1 and 2 employ probit regression and columns 3 and 4 employ OLS regression. Columns 1 and 3 do not include industry and time period fixed effects while Columns 2 and 4 do. All variables are defined in the Appendix. Robust two-tailed z and t-statistics are presented in parentheses below the coefficients. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All standard errors are clustered at the firm level.

| | (1)<br>*GC* | (2)<br>*GC* | (3)<br>*GC* | (4)<br>*GC* |
|---|---|---|---|---|
| *AUDITOR_SWITCH* | 0.063 | 0.096* | 0.002 | 0.004 |
| | (1.174) | (1.738) | (0.279) | (0.567) |
| *OFFICE_SWITCH* | 0.033 | 0.058 | -0.003 | -0.002 |
| | (0.450) | (0.786) | (-0.457) | (-0.322) |
| *DUAL_SWITCH* | 0.345*** | 0.367*** | 0.068*** | 0.068*** |
| | (6.286) | (6.635) | (7.067) | (7.118) |
| *LN_AGE* | -0.106*** | -0.113*** | -0.001 | -0.003 |
| | (-4.329) | (-4.496) | (-0.580) | (-1.398) |
| *LN_AT* | -0.285*** | -0.335*** | -0.032*** | -0.034*** |
| | (-16.635) | (-17.268) | (-22.092) | (-21.956) |
| *ABNORMAL_FEES_PCT* | -0.007 | -0.004 | -0.003 | -0.003 |
| | (-0.217) | (-0.131) | (-0.933) | (-0.924) |
| *CLIENT_IMPORTANCE* | -0.000 | -0.087 | -0.005 | -0.024 |
| | (-0.000) | (-0.651) | (-0.262) | (-1.164) |
| *LEVERAGE* | 0.157*** | 0.170*** | 0.012*** | 0.014*** |
| | (3.209) | (3.581) | (3.390) | (3.863) |
| *LOSS* | 0.911*** | 0.956*** | 0.083*** | 0.075*** |
| | (19.145) | (18.018) | (19.836) | (17.936) |
| *ROA* | -0.324*** | -0.265*** | -0.064*** | -0.061*** |
| | (-5.770) | (-5.272) | (-12.967) | (-12.632) |
| *INT_COVERAGE* | -0.038** | -0.038** | -0.013*** | -0.012*** |
| | (-2.235) | (-2.174) | (-5.943) | (-5.540) |
| *GROWTH* | 0.022* | 0.015 | 0.011*** | 0.009*** |
| | (1.735) | (1.153) | (4.808) | (3.884) |
| *CURRENT_RATIO* | -0.126*** | -0.137*** | -0.013*** | -0.015*** |
| | (-6.140) | (-6.068) | (-13.667) | (-14.067) |
| *MKTBK* | -0.008** | -0.009** | 0.001 | 0.000 |
| | (-2.317) | (-2.441) | (1.263) | (0.909) |
| *ALTMAN* | -0.002 | -0.001 | -0.001*** | -0.001*** |
| | (-1.179) | (-0.604) | (-3.373) | (-2.990) |
| *INVESTMENTS* | -0.559*** | -0.604*** | -0.083*** | -0.086*** |
| | (-5.122) | (-5.106) | (-6.541) | (-6.237) |
| *BIGN* | 0.141** | 0.264*** | 0.020*** | 0.034*** |
| | (2.330) | (3.749) | (5.101) | (6.184) |
| *IC_INEFFECTIVE* | 0.289*** | 0.316*** | -0.007 | -0.007 |
| | (3.426) | (3.527) | (-0.791) | (-0.786) |
| *LN_IND_CLIENTS* | -0.042** | -0.071*** | -0.008*** | -0.016*** |
| | (-2.161) | (-2.738) | (-5.770) | (-5.429) |
| Model | Probit | Probit | OLS | OLS |
| Constant | Yes | Yes | Yes | Yes |
| Industry FE's | No | Yes | No | Yes |
| Year FE's | No | Yes | No | Yes |
| N | 35,188 | 35,188 | 35,188 | 35,188 |
| R-squared | 0.570 | 0.591 | 0.450 | 0.461 |

## Table 6: Cross-sectional Tests

Table 6 conducts several cross sectional tests for situations where familiarity bias would be more or less pronounced. The variables of interest in this table are the interaction terms. Columns 1 through 6 employ probit regression while columns 7 through 12 employ OLS regression. All variables are defined in the Appendix. Robust two-tailed z and t-statistics are presented in parentheses below the coefficients. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All standard errors are clustered at the firm level.

| | (1) *GC* | (2) *GC* | (3) *GC* | (4) *GC* | (5) *GC* | (6) *GC* | (7) *GC* | (8) *GC* | (9) *GC* | (10) *GC* | (11) *GC* | (12) *GC* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *SWITCH* | 0.266*** | 0.310*** | 0.209*** | 0.236*** | 0.258*** | 0.290*** | 0.063*** | 0.063*** | 0.033*** | 0.034*** | 0.053*** | 0.054*** |
| | (4.786) | (5.490) | (5.310) | (5.889) | (5.113) | (5.619) | (6.308) | (6.341) | (5.731) | (5.976) | (6.594) | (6.697) |
| *SWITCH_x_LN_IND_CLIENTS* | -0.054* | -0.067** | | | | | -0.020*** | -0.019*** | | | | |
| | (-1.745) | (-2.183) | | | | | (-5.408) | (-5.268) | | | | |
| *SWITCH_x_SPECIALIST* | | | -0.365 | -0.447 | | | | | -0.059*** | -0.066*** | | |
| | | | (-1.025) | (-1.208) | | | | | (-2.939) | (-3.187) | | |
| *SWITCH_x_MKT_SHARE* | | | | | -1.239* | -1.435* | | | | | -0.354*** | -0.353*** |
| | | | | | (-1.695) | (-1.901) | | | | | (-5.464) | (-5.451) |
| *LN_IND_CLIENTS* | -0.036* | -0.063** | | | | | -0.007*** | -0.014*** | | | | |
| | (-1.782) | (-2.365) | | | | | (-4.731) | (-4.876) | | | | |
| *SPECIALIST* | | | 0.158* | 0.081 | | | | | 0.007** | 0.005 | | |
| | | | (1.756) | (0.785) | | | | | (1.961) | (0.881) | | |
| *MKT_SHARE* | | | | | 0.616* | 0.264 | | | | | 0.005 | -0.031 |
| | | | | | (1.690) | (0.641) | | | | | (0.268) | (-1.346) |
| Model | Probit | Probit | Probit | Probit | Probit | Probit | OLS | OLS | OLS | OLS | OLS | OLS |
| Constant | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE's | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| Year FE's | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| *N* | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 |
| R-squared | 0.570 | 0.590 | 0.569 | 0.589 | 0.569 | 0.589 | 0.450 | 0.461 | 0.448 | 0.458 | 0.449 | 0.459 |

## Table 7: Analysis of Internal Control Weaknesses

Table 7 conducts several tests to determine if internal control reporting mimics going concern reporting. $SWTICH_{it}$ is the variable of interest in these tables. Columns 1 and 2 employ probit regression and Columns 3 and 4 employ OLS regression. Columns 5 and 6 utilize Poisson regression as the dependent variable for those columns takes the form of a count variable. All variables are defined in the Appendix. Robust two-tailed z and t-statistics are presented in parentheses below the coefficients. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All standard errors are clustered at the firm level.

| | (1) *IC_INEFFECTIVE* | (2) *IC_INEFFECTIVE* | (3) *IC_INEFFECTIVE* | (4) *IC_INEFFECTIVE* | (5) *IC_WEAKNESS_COUNT* | (6) *IC_WEAKNESS_COUNT* |
|---|---|---|---|---|---|---|
| *SWITCH* | 0.307*** | 0.322*** | 0.023*** | 0.023*** | 0.822*** | 0.855*** |
| | (6.760) | (7.062) | (5.488) | (5.687) | (5.528) | (5.657) |
| *LN_AGE* | 0.007 | -0.001 | 0.000 | 0.000 | -0.027 | -0.046 |
| | (0.339) | (-0.032) | (0.354) | (0.174) | (-0.358) | (-0.602) |
| *LN_AT* | 0.037*** | 0.044*** | 0.002*** | 0.003*** | 0.113*** | 0.144*** |
| | (3.589) | (3.742) | (3.555) | (3.625) | (2.879) | (3.236) |
| *ABNORMAL_FEES_PCT* | 0.048* | 0.054** | 0.003* | 0.003* | -0.218* | -0.206 |
| | (1.896) | (2.123) | (1.780) | (1.806) | (-1.721) | (-1.638) |
| *CLIENT_IMPORTANCE* | -0.239 | -0.015 | -0.010* | 0.003 | -0.573 | -0.229 |
| | (-1.643) | (-0.102) | (-1.657) | (0.389) | (-1.437) | (-0.566) |
| *LEVERAGE* | -0.023 | -0.014 | -0.000 | -0.000 | -0.058 | -0.032 |
| | (-0.821) | (-0.512) | (-0.342) | (-0.010) | (-0.712) | (-0.405) |
| *LOSS* | 0.305*** | 0.281*** | 0.021*** | 0.020*** | 0.989*** | 0.904*** |
| | (7.996) | (7.127) | (7.276) | (6.609) | (7.417) | (6.379) |
| *ROA* | 0.070 | 0.069 | 0.003*** | 0.003*** | 0.085 | 0.078 |
| | (1.602) | (1.580) | (2.582) | (2.651) | (0.656) | (0.626) |
| *INT_COVERAGE* | -0.023 | -0.014 | -0.002 | -0.001 | -0.025 | -0.011 |
| | (-1.195) | (-0.701) | (-1.128) | (-0.617) | (-0.533) | (-0.237) |
| *GROWTH* | 0.030** | 0.029** | 0.002* | 0.002* | 0.070** | 0.079** |
| | (2.231) | (2.089) | (1.853) | (1.700) | (2.168) | (2.383) |
| *CURRENT_RATIO* | -0.006 | -0.013 | -0.000 | -0.001 | -0.020 | -0.033 |
| | (-0.752) | (-1.464) | (-0.685) | (-1.473) | (-0.705) | (-1.040) |
| *MKTBK* | 0.005 | 0.005 | 0.000 | 0.000 | 0.017 | 0.014 |
| | (1.461) | (1.195) | (1.380) | (1.335) | (1.416) | (1.053) |
| *ALTMAN* | 0.000 | 0.000 | 0.000 | 0.000 | 0.007 | 0.008 |
| | (0.067) | (0.112) | (0.032) | (0.029) | (1.589) | (1.498) |
| *INVESTMENTS* | -0.120 | -0.195 | -0.008 | -0.013** | -0.703* | -0.949** |
| | (-1.082) | (-1.631) | (-1.330) | (-2.010) | (-1.805) | (-2.431) |
| *BIGN* | 0.086* | -0.076 | 0.006* | -0.004 | 0.303** | -0.042 |
| | (1.810) | (-1.281) | (1.915) | (-0.976) | (1.964) | (-0.208) |
| *GC* | -0.043 | -0.042 | -0.004 | -0.004 | 0.380 | 0.418 |
| | (-0.549) | (-0.517) | (-0.795) | (-0.789) | (1.457) | (1.572) |
| *LN_IND_CLIENTS* | -0.012 | 0.066*** | -0.001 | 0.004*** | -0.023 | 0.091 |
| | (-0.819) | (2.700) | (-0.818) | (2.681) | (-0.441) | (1.100) |
| Model | Probit | Probit | OLS | OLS | Poisson | Poisson |
| Constant | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE's | No | Yes | No | Yes | No | Yes |
| Year FE's | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 | 35,188 |
| R-Squared | 0.021 | 0.047 | 0.006 | 0.012 | 0.005 | 0.009 |

## References


Allen D. Blay, Marshall A. Geiger, and D. S. North. 2011. The Auditor's Going-Concern Opinion as a Communication of Risk. *AUDITING: A Journal of Practice & Theory* 30 (2):77-102.

Altman, E. I. 1968. Financial Ratios, Discriminant Analysis and Prediction of Corporate Bankruptcy. *Journal of Finance* 23 (4):589-609.

Ayres, D., and S. Dolvin. 2019. Unfamiliarity Breeds Resentment: Familiarity Bias in Initial Credit Ratings. Working paper, Butler University.

Basioudis, I. G., E. Papakonstantinou, and M. A. Geiger. 2008. Audit Fees, Non-Audit Fees and Auditor Going-Concern Reporting Decisions in the United Kingdom. *Abacus* 44 (3):284-309.

Bhaskar, L. S., G. V. Krishnan, and W. Yu. 2017. Debt Covenant Violations, Firm Financial Distress, and Auditor Actions. *Contemporary Accounting Research* 34 (1):186-215.

Blay, A. D., and M. A. Geiger. 2013. Auditor Fees and Auditor Independence: Evidence from Going Concern Reporting Decisions*. *Contemporary Accounting Research* 30 (2):579-606.

Boone, J. P., I. K. Khurana, and K. K. Raman. 2010. Do the Big 4 and the Second-tier firms provide audits of similar quality? *Journal of Accounting and Public Policy* 29 (4):330-352.

Bruynseels, L., and E. Cardinaels. 2014. The Audit Committee: Management Watchdog or Personal Friend of the CEO? *The Accounting Review* 89 (1):113-145.

Carcello, J. V., and A. L. Nagy. 2004. Audit Firm Tenure and Fraudulent Financial Reporting. *AUDITING: A Journal of Practice & Theory* 23 (2):55-69.

Carcello, J. V., and T. L. Neal. 2000. Audit Committee Composition and Auditor Reporting. *The Accounting Review* 75 (4):453-467.

———. 2003. Audit Committee Characteristics and Auditor Dismissals following "New" Going-Concern Reports. *The Accounting Review* 78 (1):95-117.

Carey, P., and R. Simnett. 2006. Audit Partner Tenure and Audit Quality. *The Accounting Review* 81 (3):653-676.

Carey, P. J., M. A. Geiger, and B. T. O'Cconnell. 2008. Costs Associated With Going-Concern-Modified Audit Opinions: An Analysis of the Australian Audit Market. *Abacus* 44 (1):61-81.

Carson, E., Fargher, N. L., Geiger, M. A., Lennox, C. S., Raghunandan, K., and Willekens M. 2013. Audit reporting for going-concern uncertainty: A research synthesis. *Auditing: A Journal of Practice and Theory* 32(1): 353-384.

Chan, K. H., K. Z. Lin, and P. Mo. 2006. A political-economic analysis of auditor reporting and auditor switches. *Review of Accounting Studies* 11 (1).

Chen, K. C. W., and B. K. Church. 1996. Going Concern Opinions and the Market's Reaction to Bankruptcy Filings. *The Accounting Review* 71 (1):117-128.

Chow, C. W., and S. J. Rice. 1982. Qualified audit opinions and auditor switching. *The Accounting Review* 57 (2): 326–335.

Coval, J.D., Moskowitz, T.J., 1999. Home Bias at Home: Local Equity Preference in Domestic Portfolios. The Journal of Finance 54, 2045-2073.

DeFond, M. L., and C. S. Lennox. 2011. The effect of SOX on small auditor exits and audit quality. *Journal of Accounting and Economics* 52 (1):21-40.

DeFond, M. L., K. Raghunandan, and K. R. Subramanyam. 2002. Do Non-Audit Service Fees Impair Auditor Independence? Evidence from Going Concern Audit Opinions. *Journal of Accounting Research* 40 (4):1247-1274.

Fargher, N. L., and L. Jiang. 2008. Changes in the Audit Environment and Auditors' Propensity to Issue Going-Concern Opinions. *AUDITING: A Journal of Practice & Theory* 27 (2):55-77.

Financial Accounting Standards Board (FASB). 2013. Presentation of financial statements (TOPIC 205): Disclosure of uncertainties about an entity's going concern presumption. http://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176163024339&acceptedDisclaimer=true.

Feldmann, D. A., and W. J. Read. 2010. Auditor Conservatism after Enron. *AUDITING: A Journal of Practice & Theory* 29 (1):267-278.

Fox, C.R., and J. Lavav. 2000. Familiarity Bias and Belief Reversal in Relative Liklihood Judgment. Organizational Behavior and Human Decision Processes 82 (2): 268-292.

Geiger, M. A., and K. Raghunandan. 2002. Auditor tenure and audit reporting failures. *Auditing: A Journal of Practice & Theory* 21 (1): 67–78.

Geiger, M. A., K. Raghunandan, and D. V. Rama. 2005. Recent Changes in the Association between Bankruptcies and Prior Audit Opinions. *AUDITING: A Journal of Practice & Theory* 24 (1):21-35.

Geiger, M. A., K. Raghunandan, and D. V. Rama. 1998. Costs associated with going-concern modified audit opinions: An analysis of auditor changes, subsequent opinions and client failures. *Advances in Accounting* 16: 117–140.

Goh, B. W., J. Krishnan, and D. Li. 2013. Auditor Reporting under Section 404: The Association between the Internal Control and Going Concern Audit Opinions. *Contemporary Accounting Research* 30 (3):970-995.

Hammersley, J. S., L. A. Myers, and J. Zhou. 2012. The Failure to Remediate Previously Disclosed Material Weaknesses in Internal Controls. *AUDITING: A Journal of Practice & Theory* 31 (2):73-111.

Harris, M.K., T.C. Omer, and P.A. Wong. 2019. Going, Going, Still Here? Determinants and Reactions to Consecutive Going Concern Opinions. Working paper, Washington State University.

Hoitash, R., and U. Hoitash. 2009. The increased role of audit committees in managing relationships with external auditors: Evidence from the U.S. *Managerial Auditing Journal* 24 (4): 368–397.

Honda, H., K. Abe, T. Matsuka, and K. Yamagishi. 2011. The Role of Familiarity in Binary Choice Inferences. *Memory & Cognition* 39 (5): 851-863.

Huberman, G., 2001. Familiarity breeds investment. Review of Financial Studies 14, 659-680.

Ivkovic, Z., Weisbenner, S., 2005. Local Does as Local Is: Information Content of the Geography of Individual Investors' Common Stock Investments. The Journal of Finance 60, 267-306.

Johnson, E., I. K. Khurana, and J. K. Reynolds. 2002. Audit-Firm Tenure and the Quality of Financial Reports*. *Contemporary Accounting Research* 19 (4):637-660.

Kang, J.-K., Stulz, R.M., 1997. Why is there a home bias? An analysis of foreign portfolio equity ownership in Japan. Journal of Financial Economics 46, 3-28.

Kaplan, S. E., and D. D. Williams. 2012. The changing relationship between audit firm size and going concern reporting. *Accounting, Organizations and Society* 37 (5):322-341.

———. 2013. Do Going Concern Audit Reports Protect Auditors from Litigation? A Simultaneous Equations Approach. *The Accounting Review* 88 (1):199-232.

Knechel, W. R., and A. Vanstraelen. 2007. The Relationship between Auditor Tenure and Audit Quality Implied by Going Concern Opinions. *AUDITING: A Journal of Practice & Theory* 26 (1):113-131.

Krishnan, J. 1994. Auditor switching and conservatism. *The Accounting Review* 69 (1): 200–215.

Krishnan, J., and J. Krishnan. 1996. The role of economic trade-offs in the audit opinion decision: An empirical analysis. *Journal of Accounting, Auditing and Finance* 11 (4): 565–586.

Krishnan, J., and R. Stephens. 1995. Evidence on opinion shopping from audit opinion conservatism. *Journal of Accounting and Public Policy* 14 (3): 179–201.

Lennox, C. 2000. Do companies successfully engage in opinion shopping? Evidence from the U.K. *Journal of Accounting and Economics* 29 (3): 321–337.

Li, C. 2009. Does Client Importance Affect Auditor Independence at the Office Level? Empirical Evidence from Going-Concern Opinions*. *Contemporary Accounting Research* 26 (1):201-230.

Li, K., 2004. Confidence in the Familiar: An International Perspective. Journal of Financial and Quantitative Analysis 39, 47-68.

Lim, C.-Y., and H.-T. Tan. 2008. Non-audit Service Fees and Audit Quality: The Impact of Auditor Specialization. *Journal of Accounting Research* 46 (1):199-246.

Massa, M., Simonov, A., 2006. Hedging, Familiarity and Portfolio Choice. The Review of Financial Studies 19, 633-685.

Moeckel, C., and R. D. Plumlee, 1989, Auditors' confidence in recognition of audit evidence, *The Accounting Review* 64: 653.

Nofsinger, J.R., Varma, A., 2012. Individuals and Their Local Utility Stocks: Preference for the Familiar. Financial Review 47, 423-443.

Peecher, M. E., and M. D. Piercey, 2008, Judging audit quality in light of adverse outcomes: evidence of outcome bias and reverse outcome bias. *Contemporary Accounting Research* 25: 243–274.

Plumlee, R. D., 1985, The standard of objectivity for internal auditors: memory and bias Effects. *Journal of Accounting Research* 23: 683–699.

Public Company Accounting Oversight Board (PCAOB). 2003. AU Section 341: The auditor's consideration of an entity's ability to continue as a going concern. Available at: http://pcaobus.org/Standards/Auditing/Pages/AU341.aspx.

Public Company Accounting Oversight Board (PCAOB). 2012. Standing Advisory Group Meeting: Going concern. Available at: http://pcaobus.org/ News/Events/Documents/05172012_ SAG Meeting/Going_Concern.pdf.

Public Company Accounting Oversight Board (PCAOB). 2015a. Standard-setting projects. Available at: http://pcaobus.org/Standards/Documents/201503 _standard_setting_agenda.PDF.

Public Company Accounting Oversight Board (PCAOB). 2015b. Release No. 2015-005: Concept release on audit quality indicators. Available at: https://pcaobus.org//Rulemaking/Docket%20041/Release_2015_005.pdf.

Public Company Accounting Oversight Board (PCAOB). 2016. Standard-setting agenda. Office of the Chief Auditor. Available at: ttps://pcaobus.org/Standards/Documents/2016Q3-standard-setting-agenda.pdf.

Petersen, M. A. 2009. Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *Review of Financial Studies* 22 (1):435-480.

Read, W.J., and Yezegel, A. 2016. Auditor Tenure and Going Concern Opinions for Bankrupt Clients: Additional Evidence. *Auditing: A Journal of Practice & Theory* 35 (1): 163-179.

Reichelt, K., and D. Wang. 2010. National and Office-Specific Measures of Auditor Industry Expertise and Effects on Audit Quality. *Journal of Accounting Research* 48 (3):647-686.

Riff, S., and Y. Yagil. 2016. Behavioral Factors Affecting the Home Bias Phenomenon: Experimental Tests. *Journal of Behavioral Finance* 17, 267-279.

Robinson, D. 2008. Auditor Independence and Auditor-Provided Tax Service: Evidence from Going-Concern Audit Opinions Prior to Bankruptcy Filings. *AUDITING: A Journal of Practice & Theory* 27 (2):31-54.

Schumacher, D., 2017. Home Bias Abroad: Domestic Industries and Foreign Portfolio Choice. *The Review of Financial Studies* 31, 1654-1706.

Smith, D. B. 1986. Auditor ‘‘subject-to’’ opinions, disclaimers and auditor changes. *Auditing: A Journal of Practice & Theory* 6 (1): 95–108.

Tan, H.-T., 1995, Effects of expectations, prior involvement, and review awareness on memory for audit evidence and judgment. *Journal of Accounting Research* 33: 113–135.

Trotman, K.T., H.C. Tan, and N. Ang. 2011. Fifty-year overview of judgment and Decision-Making Research in Accounting. *Accounting and Finance* 51: 270-360.

Tysiac, K. 2014. FASB defines management’s going-concern responsibilities. *Journal of Accountancy, American Institute of CPA's.* Available at: http://www.journalofaccountancy.com/news/2014/aug/201410841.html

U.S. House of Representatives. 2002. The Sarbanes-Oxley Act of 2002. Public Law 107-204 [H. R. 3763]. Washington, DC: Government Printing Office.

Vanstraelen, A. 2003. Going-concern opinions, auditor switching, and the self-fulfilling prophecy effect examined in the regulatory context of Belgium. *Journal of Accounting, Auditing and Finance* 18: 231–253.

Willenborg, M., and J. C. McKeown. 2000. Going-concern initial public offerings. *Journal of Accounting and Economics* 30 (3):279-313.Zmijewski, M. E. 1984. Methodological issues related to the estimation of financial distress prediction models. *Journal of Accounting Research* 22:59-82.